

CARBONITE

www.carbonite.com

Backup Review Rating



Reviewed on 1/6/08

Summary

As the guys who designed the iPod undoubtedly appreciate, it's hard to design a simple product. In the world of online backup, Carbonite has succeeded to a remarkable degree in making a truly simple service. For the consumer, SOHO, and very small business user, Carbonite is just about perfect, though it is still missing a few features that some users may desire. Carbonite's "backup for dummies" approach to product design hides what is actually a rich set of features and technology. Carbonite says that backup "ought to be like an insurance policy" – you pay your money and they protect your data. It is, in fact, almost that simple.

The most recent magazine review of Carbonite was in a four-product bake-off:

PC Plus Magazine, Jan, '08

5/5 stars, Editor's Choice Award

"Most online back-up services require you to learn a whole new interface, but Carbonite keeps the extra hassle to an absolute minimum. Restoration is just as easy."

Importantly, Carbonite has the backing of a couple of Silicon Valley heavy-hitter VCs. They have raised a lot of money – \$27 million – and they are clearly out to build a brand name for themselves with paid endorsements from the likes of Howard Stern, Rush Limbaugh, Dr. Laura, and tech gurus Kim Komando and Leo LaPorte. It appears to be working and the company reports that they've had 18 successive months of double-digit month-over-month revenue growth.

Carbonite does not have a 2GB-free-forever model like many of its competitors. Instead, they have limited time free trial, more like what you'd get from the major anti-virus vendors. Unlike the 2GB free offers, however, Carbonite gives you unlimited backup space during the free trial period. In fact, Carbonite was the first backup company to offer unlimited backup for a fixed price – an innovation that has been copied by at least a couple of their competitors. The advantage of an unlimited space trial is that it really gives you a sense of the ease of use that is inherent with Carbonite – when you sign up, you literally just put in your email address and password, and Carbonite defaults to just backing up everything. There are no directory trees to pick from, no deciding about backing up this file or that file, no new UI that you have to figure out. In fact there's no need to decide anything. Put in your credit card at the end of the trial period, and Carbonite will back up all the user-generated files on your PC automatically, no questions asked.

What's missing from Carbonite? Well, the biggest drawback is that there's no web interface yet for accessing files in your backup if you're away from your usual PC. This capability does not, per se,

have much to do with backing up your PC or protecting your files, but it is a nice-to-have that some of Carbonite's competitors offer.

Also, Carbonite does not have a version specifically aimed at enterprise customers with centralized administration, proxy support, and other features that a business may need. But at \$49.95 per year for unlimited data storage, it's less expensive than its competitors and a great value by any standards.

Pros:

- Simple sign up procedure
- Unlimited backup space for flat price
- Free trial period with unlimited backup space
- Least expensive unlimited service at \$49.95/year
- Backs up open and locked files
- Mac version in beta
- Block level incremental backup
- Fast, generally limited only by your internet connection
- Versions – recover old versions of your files
- Effective automatic throttling of CPU and bandwidth utilization
- Data encrypted before transmission, and transmission is over secure https link
- Offers private encryption key
- Backs up external hard drives
- Backups are continuous – no need to schedule. But offers scheduling options nevertheless.
- 8 Languages

Cons:

- Web site not as useful as it should be. Some resources not obvious.
- Depends on knowing how to use Windows Explorer
- No web access
- No "Pro" product for business users
- Only understands file extensions, not what they are. So Carbonite does not know that jpg, raw, and gif are all picture files.
- No month-to-month billing

Company Information

Location:	Boston, MA
Est. revenues:	\$7.0 M 2007 (guess – company does not comment)
Employees :	55
Financing:	\$27 M from leading VCs
Subscribers:	Guessing 100,000 paid subscribers
Stored data:	2.8 petabytes
Positioning:	"Backup. Simple."
Sales channels:	Direct to consumer. Marketing partners like Microsoft Money. Affiliate and reseller programs.

Pricing

\$49.95 for one year

\$89.95 for two years

Getting started and initial backup

You can sign up for a free trial with just an email and a password.



The screenshot shows a registration form titled "Start Your Risk Free Trial". It features a green circular badge on the left that says "15 DAYS FREE". The main text reads "Try Carbonite free for 15 days. No credit card required." Below this are four input fields: "Email Address:", "Create Password:", "Confirm Password:", and "Offer Code: (optional)". A prominent orange button with a play icon and the text "Start Your Free Trial" is centered below the fields. At the bottom left, there is a disclaimer: "By clicking Start Your Free Trial you agree to Carbonite's Terms of Use. Carbonite values your privacy." On the bottom right, there is a "HACKER SAFE TESTED 01-OCT" logo with a green checkmark.

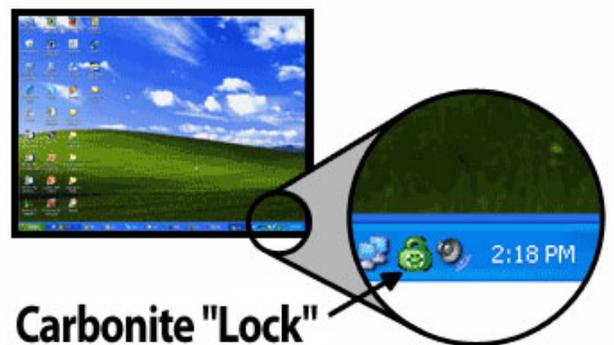
The installation of the PC software was quick and easy. As part of the installation, Carbonite asks you if you want to keep your own encryption key. They strongly discourage this process, and wisely so: if you lose your own encryption key, your backup is bye-bye. Carbonite will not be able to get it back.

When you install the PC software, Carbonite asks you if you want to back up everything in your Documents and Settings folder (the default), or choose what you want to backup you later. The company says nearly everyone just clicks past this and takes the default. The Documents and Settings folder will pick up all the My Documents folders for all users, plus your desktop and most settings, such as internet favorites. Unless you have specifically set up a directory that is not under documents and settings, this default setting should pick up all your files, including email, Microsoft Office, Quicken, and almost anything else you'd have on your PC.

As you get toward the end of your free trial period (15 days on the web site, but generally 30 days if you use the offer codes from any of their radio advertisements), a little pop-up appears on your system tray reminding you that it's time to put in your credit card and pay up. If your trial expires, Carbonite keeps your data for another 30 days before deleting it. Meanwhile, they remind you a couple more times by email and using the system tray pop-up.

Once installed, the Carbonite lock icon will appear on the system tray. The lock will be green if everything is operating normally. If you are disconnected from the Internet for more than 24 hours, the Carbonite lock will turn yellow to remind you that your backup is out of date. Also, Carbonite will send you an email notification.

Carbonite begins the initial backup as soon as installation is complete. It scans your disk first to make an inventory of what needs to be backed up. All the backup clients do the same thing, but Carbonite seems to be particularly good at staying out of your way if you're using your PC for other work. Not only do they regulate the CPU utilization, but they also monitor the disk queue since the initial scan



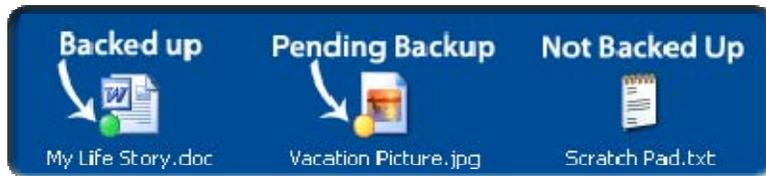
Carbonite "Lock"

is more disk intensive than CPU intensive. We didn't see this attention to detail in any of the other products we tested.

Carbonite backs up all file types except executables (such as .exe and .dll), system files, and temporary files. During the free trial, video files are not backed up.

After the initial backup is complete

Carbonite is the only online backup product that doesn't force users to learn a new user interface to change backup selections. Carbonite does everything with Windows Explorer, an application most users already know.

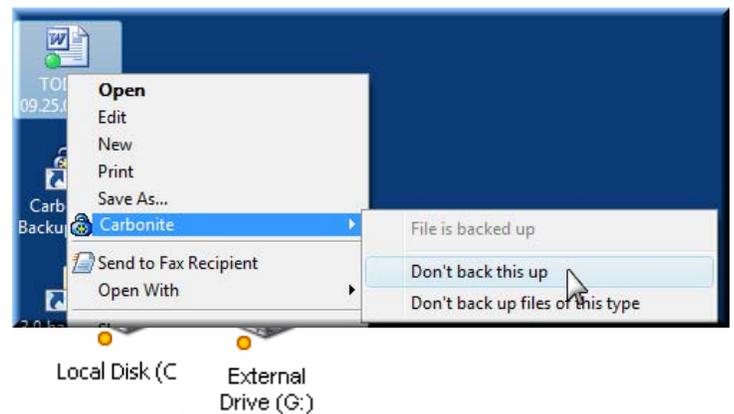


If you open Windows Explorer, you'll see that Carbonite has put little green or yellow dots on the files and folders that are backed up. A file or folder with a green dot has been successfully backed up. A yellow dot indicates that

the file or folder is waiting to be backed up. A file that has no dot is not being backed up.

By right clicking on any file or folder that is being backed up, users have the option to "Don't back this up" or can choose "Don't back up files of this type." In the example illustrated here, right-clicking on the Word file and selecting "Don't back this up" will cause Carbonite to not back up this file. Selecting "Don't back up files of this type" will cause Carbonite to not back up any Word files.

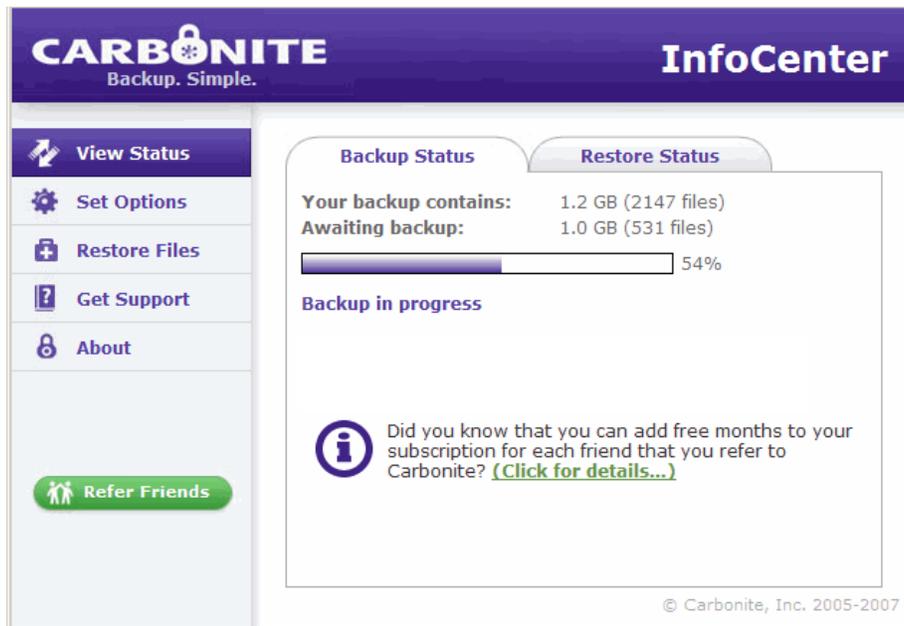
This applies to entire drives. External hard drives can be backed up as well.



You can also select "Back up all files of this type." Even normally excluded file types such as .exe or .dll can be backed up in this manner.

Carbonite InfoCenter

While you do all your file and folder selection (and even Restore functions) from Windows Explorer, Carbonite does have a UI that allows you to change certain settings and check the status of your backup. Clicking on the Carbonite lock on the system tray will open the Carbonite InfoCenter. The InfoCenter displays the status of backup, set options, restore files, etc.



The “Set Options” tab allows the user to turn off the colored status dots on files and folders. We’re not sure why you would want to do this because with the colored dots turned off, you really won’t know what’s backed up. Maybe you just assume that everything is backed up and perhaps the little dots annoy some people. Seems like a fairly useless option to us.

Normally, Carbonite backs up at full speed. Upload bandwidth is generally limited only by the speed of the user’s Internet connection. In our tests, the upload speed was limited by the 1.6mbps speed of our office’s Internet connection. Carbonite claims that there is not practical limit to the upload speed other than your own connection and the latency and speed of the various peering points between your computer and Carbonite’s data center in Boston, MA.

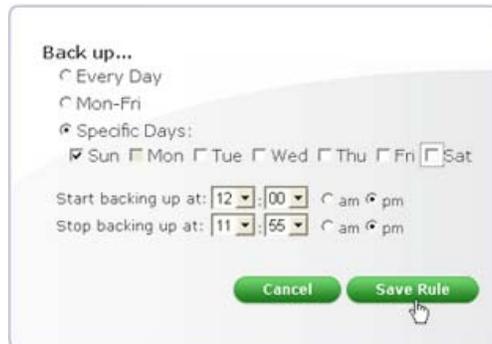
Carbonite automatically monitors the PC CPU, disk queue, and Internet usage. It’s surprisingly good at getting out of the way if there is any other activity on the PC. When you’re doing anything else on your PC, Carbonite drops down to a low-priority mode and stays there. Once Carbonite sees one minute of PC inactivity, it moves back up to full speed. However, Carbonite cannot tell if other devices are sharing the Internet connection, such as someone else who is trying to use Skype or other VoIP services. The options tab lets the user keep Carbonite in a low- priority mode so that it will be less likely to interfere with other Internet users on the network. An initial backup will go much slower in Low Priority mode, but after the initial backup, some users keep Carbonite in Low Priority mode at all times.



You can also right click on the system tray “lock” icon and a little shortcut menu appears that lets you change to Low Priority. If you’re really worried about Carbonite taking up any resources, you can either pause it for 24 hours (it will automatically resume) or you can disable it completely.

Scheduling backups

Most Carbonite users probably never look at this option and just leave Carbonite in its automatic continuous backup mode. But users with multiple PCs sharing one Internet connection may want to avoid backups during business hours. So a scheduling option is available.



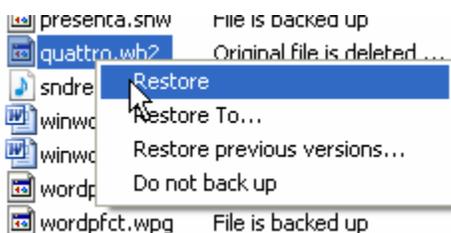
Backup can be scheduled to happen at a certain time, or certain hours of the day can be blocked out. The Advanced Scheduling option lets you create very detailed rules, such as different times of the day for different days of the week. Why you would want to back up at a different time on Monday than on Tuesday is a mystery to us, but the capability is there nonetheless.

Restoring files

Carbonite creates a "Carbonite Backup Drive" that contains all the drives, folders, and files that you've backed up. The install process puts a shortcut to the "Carbonite Backup Drive" on your desktop, or you can see it also when you open "My Computer." Browsing through the Carbonite Backup Drive will be much the same as browsing through your C: drive, except only backed up files and folders will be there.

Restoring tends to fall into three categories:

1. Restoring a specific file that was accidentally deleted.
2. Restoring an entire drive to a similar computer.
3. Restoring an XP backup to Vista



Restoring a specific file or folder is simple and quick. The Carbonite Backup Drive will display everything that has been backed up. (If a file has been deleted from the PC, Carbonite keeps it for 30 days). Navigate to the deleted file (it will be marked as "Original file is Deleted"), right click, and select "Restore". The file or folder will reappear on your C: drive.

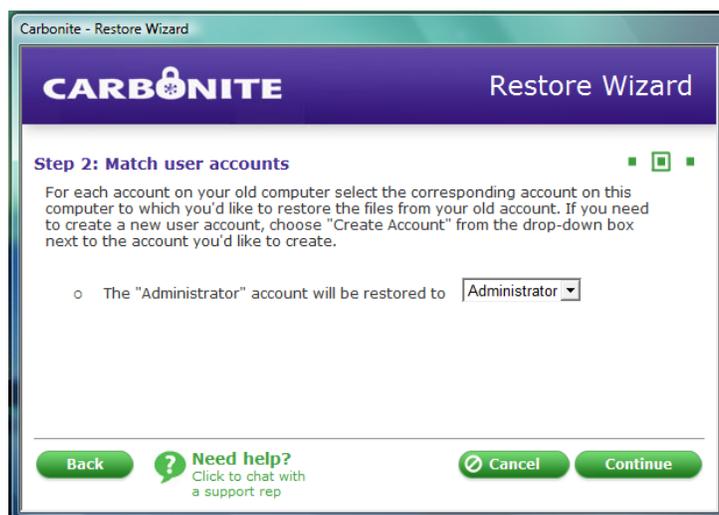
Files can be restored to the original folder, or to some other folder. If multiple versions of this file were saved over time, any version can be restored. It will only take seconds for the file to be restored. This feature is particularly useful if you overwrite a version of a document by doing a File Save instead of File SaveAs.



Restoring all your files to a new PC (with the same Windows operating system) is also easy. Reinstall Carbonite on the new PC using the same username and password. Carbonite will recognize the new hardware and will automatically go into "recover mode". Restore Mode waits for the user to complete any restore processes before beginning to back up the

new computer or drive. To restore everything in your backup, open the Carbonite Backup Drive, right click on the C: drive and select "Restore." All backed up files will be restored to the new computer, and the old folder structure will be recreated on the new machine.

Unfortunately, Carbonite does not yet have a web access application. So if you're on a trip to Hong Kong and you left your PC at home but you need a file off of it, you can't just go into an Internet café, log in, and retrieve the file from backup. Carbonite says that they are concerned about the security implications of web access. In order to retrieve a file with just a web browser, the file must be unencrypted before it is sent over the Internet to the browser. In the case of Mozy, for example, you must give Mozy permission to unencrypt your files if you want to use their web access. Carbonite says that they do not want to be in the position of ever dealing with unencrypted files. They are working on a solution for remote file access, but they say that it will probably involve downloading a small application that will decrypt files locally.



Restoring from XP to Vista

Because XP and Vista have different folder conventions, Carbonite offers a "restore wizard" that helps put the contents of XP folders into the right place on a new Vista machine. This wizard doesn't exactly take all the work out of migrating from XP to Vista, but it's a good start. Considering that a high percentage of people buying new PCs today are probably migrating from XP to Vista, this wizard is pretty handy. And using your online backup is a pretty convenient way to move all your old stuff to your new machine, even if the old machine is still working ok.

Carbonite's back-end infrastructure uses RAID-6 redundant disk arrays. Essentially what this means is that your data are spread out over arrays of 8 one-terabyte industrial hard drives. You would have to lose 3 of the 8 drives at the same moment before any data is actually lost. (Even then, you still have a copy on your PC, unless it fails at the same moment as well). This is pretty standard data center technology. Carbonite keeps one hot spare hard drive running for every 16 disks. If one of the live disks starts to look flakey (based on predictive software), it is taken out of service and replaced with the hot spare. Carbonite calculates that their servers are 36 million times more reliable than the hard drive in your PC. Most of the backup services we tested claim to have similar redundant storage technology, so Carbonite is in no way out front in this department. But it's good to see that they've thought about carefully and are using time-tested tools to achieve very high reliability.

Conclusion

Of all the backup services we tried, if all you want to do is protect the data on your PC from theft, hard drive failures, fire or any other kind of disaster, Carbonite is the cheapest and simplest way to do it.

Where Carbonite falls a little short of Mozy is on administrative tools for businesses. Carbonite does not yet have a version of their service specifically aimed at the enterprise. They say they are working on a business product, though.

But when it comes to features that an individual user or small office would need, such as private encryption keys, backing up external drives, versioning, scheduling, bandwidth management, the ability to select what is backed up at a fine grain level, and a simple recovery process, Carbonite has pretty much everything the competition has. But they've managed to implement it all in a way that is simpler and cleaner than any other vendor out there.